

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently Amended) A process of for fabricating a microstructure having containing a vacuum cavity, comprising characterized in that it comprises the following steps that consist in:
  - a) producing, in the thickness of a first silicon wafer, a porous silicon region intended to format least a part of form, completely or partly, one wall of the cavity and capable of absorbing residual gases in the cavity; and
  - b) joining the first silicon wafer to a second wafer, so as to produce the cavity.
2. (Currently Amended) The process as claimed in the preceding claim 1, characterized in that wherein step a) furthermore includes a step of consisting in impregnating the porous silicon region with another material that can also absorb residual gases in the cavity.
3. (Currently Amended) The process as claimed in claim 1, wherein either of the preceding claims, characterized in that, when the cavity has a predetermined height, the joining operation of step b) is carried out by means of an intermediate wafer whose thickness contributes to the height of the cavity.
4. (Currently Amended) The process as claimed in claim 1, wherein any one of the preceding claims, characterized in that, prior to step b), the process it includes a step of consisting in carrying out a physico-chemical preparation of the surfaces of the wafers used in step b).
5. (Currently Amended) The process as claimed in claim 1, wherein any one of the preceding claims, characterized in that, prior to step b), the process it includes a step of consisting in outgassing the wafers used in step b).

6. (Currently Amended) The process as claimed in claim 1, wherein any one of the preceding claims, characterized in that the joining operation of step b) is carried out under vacuum.

7. (Currently Amended) The process as claimed in the preceding claim 6, characterized in that wherein the joining operation is carried out by bonding at ambient temperature.

8. (Currently Amended) The process as claimed in claim 7, wherein the process the preceding claim, characterized in that it includes a step c) of consisting in annealing, at between 400 and 1000°C, the microstructure obtained after step b) so as to strengthen the bond.

9. (Currently Amended) The process as claimed in claim 2, wherein any one of Claims 2 to 8, characterized in that the other material that can also absorb the residual gases in the cavity consists of titanium.

10. (Currently Amended) The process as claimed in claim 1, wherein any one of the preceding claims, characterized in that the second wafer and/or the intermediate wafer are made of silicon or glass.

11. (Currently Amended) The process as claimed in claim 1, wherein the process any one of the preceding claims, characterized in that it is applied collectively to several microstructures.

12. (Currently Amended) A microstructure containing having a vacuum cavity, comprising: characterized in that it comprises

at least two wafers that contribute to bounding the cavity, one of said wafers, called the first wafer of said two wafers, is being made of silicon and includes including a porous silicon

region capable of absorbing residual gases in the cavity, the region being produced in the thickness of said silicon wafer.

13. (Currently Amended) The microstructure as claimed in claim 12, wherein the preceding claim, characterized in that the porous silicon region is impregnated with another material that can also absorb residual gases in the cavity.

14. (Currently Amended) The microstructure as claimed in claim 13, wherein the preceding claim, characterized in that the other material that can also absorb residual gases in the cavity is titanium.

15. (Currently Amended) The microstructure as claimed in claim 12, wherein any one of claims 12 to 14, characterized in that the wafers other than the first wafer are made of silicon or glass, or a combination of silicon and glass.

16. (Currently Amended) The microstructure as claimed in claim 12, wherein said microstructure any one of claims 12 to 15, characterized in that it includes a resonator housed in the cavity.

17. (Currently Amended) A sensor having a microstructure as claimed in claim 12 any one of claims 12 to 16.

18. (Currently Amended) The sensor as claimed in the preceding claim 17, characterized in that wherein the sensor is a resonant pressure sensor or a resonator accelerometer or a vibrating gyroscope or an electromechanical filter.